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THE  
L I F E  
O F  
Sir Isaac Newton.  
WITH AN  
ACCOUNT  
OF HIS  
WRITINGS.

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Without the Impression of the French being annexed to it.

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L O N D O N :

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W. G. C. Wright

twinkelt. Doch es sind A. P. und M. C. die sich hier befinden, und sie sind nicht zu erschrecken, denn sie sind sehr schüchtern und scheuen sich vor dem Feuer.



# THE LIFE OF

# Sir *ISAAC NEWTON*.



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IR Isaac Newton, the illustrious Subject of these Sheets, was born on Christmas-Day, in the Year 1642, at Woolstrop, in the County of Lincoln. He was descended of the eldest Branch of the Family of Sir John Newton, Bart. which Family were Lords of the Manor of Woolstrop, and have been possess'd of the Estate for near 200 Years. The Newtons remov'd thither from Westby in the same County, but origi-

nally came from *Newton* in *Lancashire*. His Mother's Name was *Anne Ayscough*, who was also of an ancient Family, and married again after the Death of her first Husband, *Sir Isaac's Father*.

She sent her Son to the Free-School of *Grantham* at Twelve Years old, and took him thence within a few Years after, that he might be made early acquainted with his own Affairs, and look after them himself. But she found him of a Disposition so little inclined to Business, and so entirely devoted to his Books, that she sent him back to *Grantham*, with Liberty to follow the Bent of his own Genius; which he indulged the better, by removing from thence to *Trinity College* in *Cambridge*, where he was admitted in 1660, at the Age of Eighteen.

In learning the Mathematicks, he had not the least Regard to *Euclid*, who appear'd to him too plain and easy to employ his Time about; he understood him almost before he had read him, and at his first View of the Subject of a Proposition, was able to Demonstrate it. He threw himself at once upon such Books as the Geometry of *Des Cartes*, and the Opticks of *Kepler*. We may justly apply to him, what *Lucan* says of the *Nile*, whose Source was unknown to the Ancients, *That it was not granted to mankind to see the Nile in a small Stream*. There are Proofs, that *Sir Isaac Newton*, at 24 Years of

of Age, had made his great Discoveries in Geometry, and laid the Foundation of his two famous Performances, the *Principia* and the *Opticks*. If the intelligent Beings, superiour to Man, do also make a Progress in Knowledge, they fly whilst we creep, and pass over without Notice the intermediate Steps, by which we slowly advance from the Perception of one Truth to another, which has a Dependance upon it.

*Nicholas Mercator*, a Native of *Holstein*, who pass'd the best Part of his Time in *England*, publish'd his *Logarithmotechnia*, in the Year 1668, in which he resolv'd the Area of an Hyperbola into an infinite Series. This was the first Time such a Method of Calculation, so dextrously drawn from the Nature of a particular Curve, had appear'd in the World. The great Dr. *Barrow*, who was at *Cambridge* with Sir *Isaac Newton*, then 26 Years of Age, remember'd presently, that he had seen the same Theory among the Writings of this young Man, not confin'd to the Hyperbola alone, but extended by general Rules to all sorts of Curves, even mechanical, to their Quadratures, Rectifications, Centres of Gravity, to Solids form'd by their Revolutions, and to the Surfaces of these Solids ; so that if the Determinations were possible, the Series would terminate at a certain Point, or if they did not terminate, the Sums might be had by Rule ; and if

if the precise Determinations were impossible, yet one might approach still nearer to Infinity; the happiest and most artful Supplement that human Wit could have invented to add to the Imperfection of it's own Knowledge.

It was a great Treasure for a Geometrician to possess so fruitful and general a Theory; 'twas still a greater Glory to have invented a Theory so surprizing and ingenious; Sir Isaac Newton, when he saw by Mercator's Book, that that skilful Man was in the same Method, and that others might follow him in it, one should think would naturally have laid open his Treasure, to have assured the true Property to himself of the Discovery. But he was contented with the Enjoyment of it, without piquing himself on the Glory of it. He says himself in a Letter in the *Commercium Epistolicum*, that he thought his Secret had been entirely discover'd by Mercator, or would have been by some other, before he should be of an Age ripe enough to publish any thing. He suffer'd, without Regret, this Invention to be ravished from him, from which he might have promised himself a great deal of Reputation; and waited till he was of a convenient Age to make himself publick, but not at all in attempting great Things. His Manuscript on the infinite series was only communicated to Mr. Collins and my Lord Broome, who were well skill'd in these Matters; and this had not been done but

but for Dr. Barrow, who would not suffer him to be altogether so modest as he had a Mind to be.

This Manuscript, taken from the Author's Closet in 1669, was entitled, *A method, whicb I had formerly found out, &c.* And if this Word, *formerly*, means only three Years, this fine Theory was discover'd before he was Four and Twenty. But besides this, the same Manuscript contains the Invention and Calculation of Fluxions, or infinite Littles, which occasion'd so great a Contest between Mr. Leibnitz and him, or rather between *Germany* and *England*. We gave the History of it in 1716, in our Panegyrick upon Mr. Leibnitz; and tho' that was the *Eulogium* of Mr. Leibnitz, yet we observ'd the Neutrality of an Historian, so much, that we have nothing new to say at present of Sir Isaac Newton. We expressly declar'd, that Sir Isaac Newton was certainly the Inventor; that the Glory of it was his own; and that the Dispute was only whether Mr. Leibnitz had borro're'd the Idea of it from him. All England is convinc'd that he did, tho' the Royal Society have not pronounced it, in their Judgment, but only insinuated it. Sir Isaac Newton was by many Years the first Inventor, Mr. Leibnitz, on the other Side was the first who publish'd this Method of Calculation; and if he took it from Sir Isaac Newton, he resembled Prometheus in the

Fable,

Fable, who stole Fire from Heaven, that he might communicate it to Men.

In 1687. Sir Isaac Newton resolved to shew himself to the World, and publish his *Mathematical Principles of Natural Philosophy*. This Book, in which he makes the profoundest Geometry a Basis for a new System of Physicks, had not, at first, all the Encouragement it deserved, and was one Day to meet with. It is wrote with a great deal of learning, but as the Author has been very sparing of his Words, and the Conclusions are often very hastily drawn from the Premises, and the Reader is sometimes forced to supply an intermediate chain of Consequences, it requir'd some time before the Publick could be able to understand it. Great Mathematicians were oblig'd to study it with care; the middling Ones did not attempt it, but as they were excited by the Testimony of the other; but at length, when the Book came to be sufficiently known, the Suffrages it had gain'd so slowly, increas'd every where to a general Cry of Admiration! Every Body was astonish'd at the fine Spirit that shone thro' the Work, and that Genius for Invention, which throughout the Extent of the happiest Age, is scarcely to be expected to fall to the Shares of three or four Men among every learned Nation.

Two chief Theories, prevail in the *Mathematical Principles*; the Doctrine of central Forces, and of the Resistance of Fluids to Bodies

Bodies moving in them ; both almost entirely new, and treated of according to the Author's sublime Notions in Geometry. There's no touching upon either of these Subjects without having Sir Isaac Newton before ones Eyes, without repeating after him, or following his Steps, and if one would disguise it, what Art or Cunning can hinder it from being known?

The Relation found out by *Kepler* between the Revolutions of the heavenly Bodies, and their Distances from one common Centre of those Revolutions, reigns throughout the whole celestial System. If we suppose, as it is necessary that a certain Force hinders those great Bodies for more than an instant to follow their natural Motion in a right Line from West to East, and draws 'em continually towards a Centre, it follows from *Kepler's* rule, that this Force, which will be central or centripetal will have a different Action upon the same Body, variable according to its different Distances from this Centre, and that in a reciprocal Proportion of the Squares of those Distances ; that is for instance, if the Body be twice as far Distant from the Centre of its Revolution as before, the Action of the central Force upon it will be four times less. Sir Isaac Newton's System seems to have been founded upon this Observation. We may also suppose or

imagine that he first of all consider'd the Moon, because it has the Earth for the Centre of its Motion.

If the Moon were to lose all the impulse, all the Tendency it has to move in a right Line from West to East, and had nothing left but the central Force, by which it is drawn towards the Centre of the Earth, it would wholly obey that Force, and following its Direction only, would move in a right Line towards the Centre of the Earth. The Motion of its Revolution being known, Sir *Isaac Newton* demonstrates, that by this Motion in the first Minute of its Descent, it describes 15 *Paris* Feet. Its Distance from the Earth is 60 of the Earth's Semidiame-  
ters; therefore when it is arrived at the Surface of the Earth, the Action of the Force, which brought it thither, would be encreas'd by the Square of 60, that is, it would be 3600 times greater than in the first Minute, and so the Moon in the last Minute would describe 3600 times 15 Feet.

Now if we suppose, that the Force acting upon the Moon, is the same with that which we call Gravity in terrestrial Bodies, it will follow from the System of *Galileo*, that the Moon, which upon its arrival to the Surface of the Earth would have describ'd 3600 times 15 Feet in one Minute, must also have describ'd 15 Feet in the first 60th Part, or second of that Minute. Now it is known by Experiments,

Experiments, which cannot be made but at small Distances from the Earth's Surface, that heavy Bodies falling upon the Earth describe 15 Feet in the first Second of their Fall. They are therefore, when we prove the Continuance of their Fall, in the same Case precisely, as if having made the same Revolution round the Earth as the Moon does, and at the same Distance, they were let fall only by the Force of their Gravity: And if they are in the same Case with the Moon, the Moon is in the same Case with them, and is not drawn every Moment towards the Centre of the Earth, but by the Force of the same Gravity. So exact a conformity of Effects, or rather this perfect Identity, can come only from that of their Causes.

'Tis true, in this System of *Galileo*, which has been hitherto follow'd, Gravity is always the same, and the centripetal Force of the Moon is not even in the Demonstration we have just now given. But the Gravity may well appear not the same, or, to speak more properly, not in our Experiments, because the greatest Heights from whence we can see Bodies fall, has no proportion to the Distance of 1500 Leagues, which they all are at from the Centre of the Earth. It is demonstrated that a Cannon Ball horizontally discharg'd, describes, according to the Hypothesis of an uniform Gravity, a Parabola terminated in a

certain Point, where it comes to the Ground, but if it was to be discharged from an height from whence we might be sensible of the Inequality of the Action of Gravity, it would describe, instead of a Parabola, an Ellipses, of which the Centre of the Earth would be one of its Focus's, that is, it would make exactly what the Moon does.

If the Moon is heavy after the same manner as all terrestrial Bodies, if it is drawn towards the Earth by the same Force, which they are; if according to Sir Isaac Newton's Expression it gravitates towards the Earth, the same Cause prevails throughout all the wonderful system of the celestial Bodies; for all Nature is the same, there is every where the same Disposition; the same Ellipses describ'd by Bodies moving round another Body, plac'd in one of their Focus's. The Satellites of *Jupiter* gravitate towards *Jupiter*, as the Moon towards the Earth, the Satellites of *Saturn* towards *Saturn*, and all the Planets together towards the Sun.

It is not known wherein the nature of Gravitation consists, nor was Sir Isaac Newton himself acquainted with it. If Gravitation is caus'd by impulse, we may conceive a piece of Marble that falls drove towards the Earth, without the Earth's being in any wise drove towards the Marble; and in a Word, all the Centres, which relates to the Motions caused by Gravitation, may be suppos'd

pos'd to be immoveable. But if it acts by Attraction, the Earth cannot attract the Marble, without the Marble's attracting the Earth; wherefore should this attractive Virtue be in one Body rather than another? Sir *Isaac Newton* always supposes the Action of Gravitation to be reciprocal in all Bodies, and proportional only to the Mass of Matter, and therefore he seems to determine, that Gravitation is really an Attraction. He makes use only of this Word upon all occasions to express the active Force of Bodies; a Force indeed unknown, and which he does not pretend to define; but if it could also act by impulse, why did he not prefer this Term, which is clearer, to the other? For every one will agree, that they cannot be used indifferently, they are so opposite. The perpetual Use of the word Attraction, supported by so great an Authority, and it may be also by Sir *Isaac*'s inclination, for the Thing itself, makes his Readers, at least familiar with an Idea proscribed by the *Cartesians*, and of which all other Philosophers have ratified the Condemnation, we must be therefore on our Guard, and not imagine any Reality in it, as we are exposed to the Danger of fancying we understand it.

Let this be as it will, all Bodies, according to Sir *Isaac Newton*, gravitate towards one another, or attract one another in proportion to the Mass of Matter contain'd in

em;

'em ; and when they turn about a common Centre, by which of Consequence they are attracted, and which they attract, their attractive forces vary in proportion to their Distances from that Centre ; and if all together with their common Centre turn about another Centre which is common to them all, there would be new Relations, which would make a strange Complication. Thus every one of the five Satellites of *Saturn* gravitates towards the other Four, and the other Four towards the Fifth ; all the Five gravitate towards *Saturn*, and *Saturn* towards them ; they all gravitate towards the Sun, and the Sun towards them all. What Geometry must have been necessary to unravel such a Chaos of Relations ? It seems rash to have undertaken it ; and one cannot, without Astonishment behold, that from so abstracted a Theory, composed of so many particular Theories, and all very difficult to handle there, should constantly arise Conclusions conformable to Facts establish'd by *Astronomy*.

These Conclusions seem sometimes even to presage Facts to which the Astronomers had not sufficiently attended. It has been said for some Time, and particularly in *England*, that when *Saturn* and *Jupiter* are in their greatest Proximity, which is 165 Millions of Leagues, their Motions are not so regular as in the rest of their Course, and Sir

Sir Isaac's System will give at once the Reason for it, which no other could ever account for. *Jupiter* and *Saturn* at that Time attract one another more strongly, because they are nearer to each other, and by this Means the Regularity of their Course is sensibly affected : The Quantity and Bounds of this irregularity are capable of being determin'd.

The Moon is the least regular of all the Planets, the exactest Tables very often fall short of pointing out her Course, and she makes such Deviations, that we can no ways find the Meaning of Dr. *Halley*, whose profound Learning in the Mathematicks is no hindrance to his being a good Poet, says, in the Latin Verses, that he has put before the third Edition of Sir Isaac Newton's *Principia*, *that the moon till then would not be subject to the Reins of any Calculation, nor subdu'd by any Astronomer*, but was so at last in this new System. All the Irregularities of her Course are there produc'd from such a Necessity as to be foretold, The Flux and Reflux of the Sea seem so naturally to arise from the Action of the Moon combin'd with that of the Sun, that this wonderful Phœnomenon seems to be so no longer.

The second of the two great Theories upon which the *Principia* turns, is that of the Resistance of Fluids to Bodies moving in them, which must enter into the principal Phœnomena

Phænomena of Nature, such, as the Motions of the Celestial Bodies, Light and Sound, Sir *Isaac* has in his wonted Manner establish'd from the profoundest Geometry all that can result from this Resistance, by whatever Cause; the Density of the Medium, the Velocity of a Body moved by the Magnitude of it's Surface, and he draws Conclusions from them at last, which destroy the Vortices of *Des Cartes*, and overthrow that great Celestial Building, which was once look'd upon to be immoveable. If the Planets move round the Sun in any Fluid whatever, let the Ethereal Matter which fills up all Space be never so subtle, the Bodies that move in it must evidently meet with Resistance; whence is it then that the Motions of these Planets are not perpetually, or even suddenly weakned, above all, how can the Comets move freely croſs these Vortices in Directions contrary to the Motions of the vortical Fluid, without any sensible Alteration in their Motions? The celestial Bodies move then in a great Void, except that their Exhalations, with the Rays of Light, which variously mix with each other, disperse a little Matter almost infinite thro' the Immaterial Space. *Attraction*, and the *Vacuum*, banish'd from Physicks by *Descartes*, are restor'd by Sir *Isaac Newton*. These two great Men, who are here set in such Opposition, had a great Reſemblance to each other, Both

of

of them were Geniuses of the first Rank, born to sway others, and lay the Foundations of Empires. Both these excellent Mathematicians saw the Necessity of Geometry in Physicks : At the same Time that Sir Isaac Newton was about his great Work of the *Principia*, he had another upon his Hands, as New and as much an Original ; this is his *Opticks*, or *Treatise of Light and Colours*. Published first in 1704, after he had made Experiments for 30 Years to compleat it.

The Anatomy of Light was the constant Object of Sir Isaac's *Opticks*. The Expression is not too bold, it is only the Thing it self ; when the Report was first of Sir Isaac Newton's Experiments, Mr. Mariotte attempted that upon the Separation of Rays, but found it so difficult that he fail'd of Success, although he had so remarkable a Genius for making Experiments, and had so well succeeded on other Occasions.

That he might not confine himself to Speculations alone, which are sometimes unjustly treated, as meer Amusements, he has given us in this Work the Invention and Design of a reflecting Telescope, tho' it was not well executed till some Time after ; we have seen a Telescope of this Sort of only two Foot and an half long, that has magnified as much as a common Telescope of eight or nine Foot long. A very considerable Advantage, and

which Posterity will undoubtedly be more sensible of, than we are at present.

One Advantage of this Book, and which is as considerable as any other Branch of Knowledge contained in it, is, that it supplies us with an excellent Model how we shall proceed in experimental Philosophy. He did not finish his *Opticks*, being interrupted in the Course of Experiments, which he judg'd necessary, and had not Time to resume his Subject: And it will require almost as able Hands as the first Architect to compleat the unfinish'd Building; but he has given as many Directions as possible to such as are willing to extend their Enquiries, and pointed out a Way for passing from a Course of *Opticks*, to an entire System of *Physicks*. Under the Form of Queries he proposes, a great Number of Hints that may assist future Philosophers.

Attraction is the prevailing Principle in this short Abridgment of a System of *Physicks*. The Force, which we call a *Hardness* in Bodies, is the mutual Attraction of their Parts, which causes them to adhere to one another, and if they are of such a Figure, as to touch one another on all Sides, without leaving any Interstices, the Bodies are perfectly hard. Of this Sort are only those little primary and unalterable Bodies, which are the Elements of all other. The Fermentations, or Chymical Effer-

Effervesencies, whose Motion is so violent, that it may be sometimes compar'd to Tempests, are the Effects of this powerful Attraction which acts in small Bodies only at small Distances.

In general, he conceives, that Attraction is the active Principle of all Nature, and the Cause of all Motion; for if a certain Quantity of Motion once impressed upon Matter by the Hand of God, was to be differently distributed according to the known Laws of Motion, it plainly appears, that this Motion would be decreasing continually from the contrary Impressions of Bodies striking each other, without a possibility of being reconciled. Thus the Universe would fall into a State of Inactivity, that would be a general Decay of the Whole; while the Power of Attraction always subsisting without diminishing its Force, will always furnish a perpetual supply of Life and Action.

He has plac'd at the End of his Opticks two Treatises of pure Geometry; the one, about squaring of Curves, the other about Numbering of Lines, which he calls of the Third Order; he has since left them out, because the Subject is different from that of Opticks, and they have been printed a-part in the Year 1711.

It is very natural to suppose, that a Person so entirely given up to Speculations was indifferent towards Busines, and incapable to ma-

riage it, notwithstanding which, in 1687, the Year that he published his *Principia*, when the Privileges of the University of Cambridge, where he had been Professor of the Mathematics from the Year 1669, by the Resignation of Doctor Barrow, in his Favour, were attack'd by King James the Second, he was one of the most zealous Maintainers of them, and the University nominated him one of their Delegates to the *High Commission Court*. He was also Member of the *Convention Parliament* in 1688, and kept his Seat there till it was dissolv'd.

In 1696, the Earl of *Hallifax*, Chancellor of the *Exchequer*, and a great Patron to learned Men, obtain'd of King *William*, to make Sir *Isaac Newton* Warden of the *Mint*, in which Office he did many important Services, at the Time the Money was called in to be re-coined. Three Years after, he was preferr'd to be Master of the *Mint*, a very considerable Employment, which he held till the Day of his Death.

We may suppose he was very qualified for this Post, from his great Skill in Geometry and Natural Philosophy; and indeed, it oftentimes requires very difficult Calculations, and many Chymical Experiments. He has given Proofs of his Ability this Way in his Table of Assays of Foreign Money, which is printed at the End of Dr. *Arbuthnot's* Book; tho' his Genius must certainly have extended

extended farther, even to Matters purely Political, in which there is no Mixture of the speculative Sciences. In the Year 1701, he was chose Member of Parliament for the University of *Cambridge*. It is perhaps an Error to suppose Learning and Business incompatible with each other, especially in Men of such a Cast ; Political Affairs well understood, are reduced to fine Calculations, and delicate Combinations, which Minds accustomed to deep Speculations more easily and surely comprehend, as soon as they are instructed in Facts, and furnish'd with necessary Materials.

Sir *Isaac Newton* had the singular Happiness of enjoying what he merited in his Life Time, very different from *Descartes*, who received only Posthumous Honours. The *English* do not respect great Talents the less for being born among them ; far from seeking to lessen them by injurious Remarks, or applauding the Envy that attacks them, they all join to raise them, and that great Liberty, which divides them on the most important Subjects, does not hinder them from uniting in this. All the learned Men in a Nation, which produces so many, placed Sir *Isaac Newton* at their Head by a kind of general Acclamation, they acknowledg'd him as their Chief and their Master, not a Rebel dar'd rise against him, nor would they suffer even a cool Admirer. His Philosophy

is follow'd by all *England*; it prevails in the *Royal Society*, and in all the excellent Works that come from it, as if it was already consecrated by the Respect of a long series of Time. In short, he was rever'd so much that Death could not add new Honours to him, he lived to see his own *Apotheosis*. *Tacitus*; who reproached the Romans with their extream Indifference for the great Men of their own Country, would have given the *English* the opposite Praise.

In the Year 1703, Sir *Isaac Newton* was chose President of the *Royal Society*, and continu'd so till his Death, which was 23 Years, without interruption, a single Instance, nor did they apprehend any ill Consequences from it. Queen *Anne* Knighted him in 1705. a Title of Honour, which shews at least that his Name had reach'd as far as the Throne, where the Names of the most illustrious Men of this Sort do not always arrive.

He was more known at Court than ever under the Reign of King *George*. The Princess of *Wales*, now Queen of *England*, had too much Understanding and Love of Knowledge not to enquire after such a Man, or to be satisfy'd without seeing him. She has often said in Publick that she thought it a Happiness to live in the same Age, and be acquainted, with him. In how many other Ages or Nations, might he have lived without finding a Princess of *Wales* ! He

He had compos'd a Treatise of antient Chronology, which he did not think of publishing, but the *Princess*, to whom he had shewn the principal Hints, found them so new and ingenious, that she was desirous to have an Abridgement of the whole Work, which was to be only for her own Use ; and this she still keeps as a most precious Treasure. Nevertheless a Copy of it got abroad, which was brought over to *France* by the Person who was so happy to possess it, and the Esteem he had for it hinder'd him from keeping it in so much Care as might have been desir'd. 'Twas seen, translated, and at last printed.

The principal Point of Sir *Isaac Newton's* System of Chronology, as it appears by this Extract, is, by following some faint Traces of the antient *Greek* Astronomy, to find out the Position of the Equinoctial Colour, with regard, to the fixed Stars, in the Time of *Chiron* the Centuar. As it is known at this Time that these Stars change their Longitude one Degree in 72 Years, if we could once learn thro' what Constellation the Colour pass'd in the time of *Chiron*, by taking its Distance from that thro' which it passes at present, we should know how long Time it is exactly since the Age of *Chiron*. *Chiron* was in the famous Voyage of the *Argonauts*, therefore this Discovery would settle that *Epoch*, and consequently that of the *Trojan* War,

War, two great Events, on which depends all the antient *Chronology*. Sir Isaac Newton places them 500 Years nearer to the Christian *Æra* than other Chronologers commonly do. This System has been attack'd by two learned French Men, who are reproach'd in *England* with too great forwardness in their Criticisins, in not waiting till the whole Work was publish'd; but they were glad to lay hold of the first Opportunity that could give them the Honour of contending with so great an Adversary, and they found others in his Place. The celebrated Dr. *Halley*, first Astronomer to the King of *Great-Britain*, has already wrote to maintain the Astronomical Part of the System, his Friendship for the Deceased, and his great Knowledge of the Subject must make him a very formidable Antagonist.

As soon as the Academy of Sciences, at *Paris*, by the Regulation made in 1669, could choose Foreigners into their Society, they did not fail to add Sir Isaac Newton to their Body. He held a constant Correspondence with them, and sent them whatever he publish'd, after he was employed in the *Mint*, he did not engage in any considerable Undertaking either in *Mathematicks*, or natural Philosophy; for tho' we may reckon the Solution of the famous Problem of the *Trajectoria*, which was proposed to the *English* as a *Defiance* from M. *Lisbuitz*, during his

his Dispute with them, at a considerable Undertaking, being intended a very difficult Proposition, yet, to Sir Isaac Newton it was a mere Pastime. He receiv'd this Problem at 4 o' Clock in the Afternoon, after coming fatigued from the *Mint*, and did not go to Bed till he had solv'd it. After having so usefully served all the learned World, he applied himself entirely to the Service of his Country in Affairs that were attended with a more direct and sensible Advantage; but when he had Leisure he would bestow it on Curiosity, and thought it no Glory to disdain any kind of Knowledge, but knew how to make Use of all. After his Death there were found many Writings of his upon Antiquity, History, and even Divinity, Sciences so remote from those by which he had made himself famous. He permitted no Moments to pass him idly, nor would he employ himself lightly, or with a slender Application to any Thing. His Health was very good till the Age of 80 Years; he then began to be troubled with an incapacity to retain his Urine, yet for five Years following, which preceeded his Death, he had intervals of Health and Ease, which he had procured by a Regimen and Applications that he never had any Occasion for before. He was oblig'd to trust the Care of his Employment in

the Mint to Mr. *Conduit*, who married his Neice, he had not done so, unless he had been well assured that he placed so important and nice a Concern in very good Hands: His Judgment was confirm'd, after his Death, by the Choice of the King, who has bestow'd that Place on Mr. *Conduit*. Sir *Isaac* did not endure much Pain till the last 20 Days of his Life; 'twas thought he certainly had the Stone, which could not be cured; when the Pain was so violent that the Drops of Sweat run from his Face, he never was heard to Groan, nor shew any signs of Impatience, but as soon as he had a Moment's Respite, would Smile, and Talk with his usual Gaiety. 'Till this Time he had constantly Read or Wrote many Hours every Day. He read the Journal of *Saturday* the 18th of *March*, in the Morning, and talk'd a good While with the celebrated Dr. *Mead*; he was in his perfect Senses till that Evening, when he quite lost them, and never recover'd them more, as if the Faculties of his Soul were subject only to a total Extinction, and could not feel a Decay. He died on the *Monday* following, the 20th of *March*, in the 85th Year of his Age.

His Body was laid in State in the *Jerusalem* Chamber; a Place from whence Persons of the highest Rank, and sometimes crown'd Heads

Heads themselves are carry'd to their Graves ; From thence he was carried to *Westminster-Abbey*, the Pall being supported by the Lord Chancellor, the Dukes of *Montrose* and *Roxburgh*, and the Earls of *Pembroke*, *Sussex* and *Macclesfield*. By these six Peers we may judge what a Number of Persons of Distinction attended the Funeral Solemnity ; the Bishop of *Rochester* read the Service, and the Corps was deposited near the Entrance of the Choir. We must go back almost as far as the ancient *Greeks*, if we would find an Example of such great Veneration for Learning. The Family of Sir *Isaac Newton* have still nearer imitated *Greece* by a Monument they are raising to his Memory at a very considerable Expence. The Dean and Chapter of *Westminster* have given them leave to erect it in a Part of the *Abby*, which has often been refused to Persons of the highest Quality. His Country and his Family have paid the same Regard to him, as if they had been of his own Choice.

He was of a middling Stature, and very lean, his Eye quick and piercing, his Face agreeable and venerable at the same Time, especially when he threw off his Peruke, and shew'd a large Head of Hair, which was perfectly white ; he never made use of Spectacles, nor lost but one Tooth in his whole

Life. His great Name will justify the mentioning these minute Circumstances.

He was of a sweet Temper, and a great Lover of Quiet, he would rather have been unknown, than have had the Calm of his Life disturb'd by those learned Outrages which Art and Science too often draw on eminent Men.

Such a Disposition is naturally attended with Modesty, and we are assur'd that he preserv'd his without Alteration, although the whole World conspir'd against it. He never talk'd of himself or others, nor ever acted in such a Manner, as to make the malicious Observers suspect him in the least capable of Vanity.

He was plain, affable and open. The greatest Geniuses do not overlook those plac'd below them, whilst others are too apt to despise their Betters. He never thought himself exempted, by his Merit and Reputation, from the common Offices of Life, nor had any Singularity either natural or affected, to distinguish him from other Men.

Altho' he adhered to the Church of *England*, he was against persecuting the Non-Conformists. He judged of Men by their Manners, and the true Non-conformists with him were the wicked and the vicious ; nevertheless, he was not for Natural Religion, being

being firinly satisfied of the Truth of Reve-  
lation, and amongst many Books which he had  
in his Hand, that which he read most, was  
the Bible.

The Plenty he had, both from a large Pa-  
trimony and his Employment, was very much  
increased by the wisest Simplicity of his Life.  
He thought it was not giving at all, to give  
only by his Will, and therefore left none  
behind him. He made larger Presents to his  
Relations, and those he thought stood in  
need of them, in his Life-time, and when a  
proper Occasion requir'd him to be expensive  
in Dress or any other Way, he was magnifi-  
cent, without regret, and did all Things with  
a good Grace. At other Times all Pomp  
which seems great only to little Minds, he ut-  
terly contemn'd, and reserv'd his Income for  
more solid Uses. It would indeed have been  
a Prodigy that a Mind accustom'd to Reflec-  
tion and true Reasoning, should at the same  
Time be enamour'd of vain Shew and empty  
Ostentation.

He never married, and perhaps never had  
Leisure to think of it, taken up as he was  
at first in profound and continual Study,  
and afterwards employ'd in an important  
and considerable Post, that left no void in  
his Life, nor any Occasion for Domestick  
Society.

His

His Personal Estate when he died, amounted to Thirty Two Thousand Pounds Sterling ; that is, Seven Hundred Thousand Livres French. M. Leibnitz, his Antagonist, died also Rich, tho' much inferior to Sir Isaac Newton.

F I N I S.

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